CLAIMS

What is claimed is:

1. A nose assembly structured to be mounted to an actuator of the type having a base and a translatable piston, the nose assembly being structured to be cooperable with a fastener having an elongated threaded pin and a collar with the collar being affixed to the pin, the nose assembly being structured to cut the collar to facilitate its removal from the pin, the nose assembly comprising:

a threaded thimble structured to be mounted to one of the base and the piston, the thimble being structured to be threadably connectable with the pin;

an anvil having a support and at least a first blade, the at least first blade being disposed on the support, the support being structured to be mounted to the other of the base and the piston; and

one of the thimble and the anvil being translatable with respect to the other of the thimble and the anvil along a cutting direction generally parallel with the longitudinal extent of the pin whereby relative translation occurs between the at least first blade and the collar along the cutting direction to cuttingly engage the blade with the collar.

2. The nose assembly of Claim 1 wherein

the anvil includes a second blade;

the at least first and second blades each including an elongated cutting edge; and

the cutting edges being spaced apart and substantially collinear.

3. The nose assembly of Claim 2 wherein

the at least first and second blades are formed on the support.

4. The nose assembly of Claim 1 wherein

the anvil includes a second blade;

the thimble including an elongated first groove and an elongated second groove formed therein; and

the at least first blade being translatably receivable in the first groove and the second blade being translatably receivable in the second groove.

5. The nose assembly of Claim 4 wherein

the thimble includes internal threading that is structured to threadably cooperate with external threading on the pin.

6. The nose assembly of Claim 5 wherein

the thimble includes an externally threaded stem that is structured to threadably cooperate with internal threading on the pin.

7. The nose assembly of Claim 4 wherein

the anvil includes an interior region formed therein; and

the thimble being translatably disposed in the interior region.

8. The nose assembly of Claim 4 wherein

the anvil includes a relief region formed therein generally in the vicinity of the at least first and second blades; and

the relief region being structured to receive at least a portion of a flared region of the collar.

9. The nose assembly of Claim 8 wherein

the at least first and second blades extend into the relief region.

10. The nose assembly of Claim 4 wherein

the anvil includes a key;

the thimble including a keyway formed therein;

the key being translatably received in the keyway, the key received in the keyway resisting relative rotation between the thimble and the anvil; and

the thimble and the anvil being structured to be simultaneously rotatable with respect to the actuator.

11. The nose assembly of Claim 1 wherein

the thimble includes internal threading that is structured to threadably cooperate with external threading on the pin.

12. The nose assembly of Claim 1 wherein

the thimble includes external threading that is structured to threadably cooperate with internal threading on the pin.

13. A combination comprising:

a fastener;

a fastener release tool;

the fastener including a threaded pin and a collar, the collar being affixed to the pin;

the fastener release tool including an actuator and a nose assembly, the nose assembly being disposed on the actuator;

the actuator including a base and a piston;

the nose assembly including a threaded thimble and an anvil;

the thimble being disposed on one of the base and the piston, the thimble being threadably connected with the pin;

the anvil having a support and at least a first blade, the at least first blade being disposed on the support, the support being disposed on the other of the base and the piston; and

the piston being translatable with respect to the base along a cutting direction generally parallel with the longitudinal extent of the pin to translate one of the thimble and the anvil with respect to the other of the thimble and the anvil along the cutting direction whereby relative translation occurs between the at least first blade and the collar along the cutting direction to cuttingly engage the blade with the collar.

14. The combination of Claim 13 wherein

the nose assembly is detachably mounted on the actuator.

15. The combination of Claim 13 wherein

the anvil includes a second blade;

the at least first and second blades each including an elongated cutting edge; and

the cutting edges being spaced apart and substantially collinear.

16. The combination of Claim 15 wherein

the at least first and second blades are formed on the support.

17. The combination of Claim 13 wherein

the anvil includes a second blade;

the thimble including an elongated first groove and an elongated second groove formed therein; and

the at least first blade being translatably received in the first groove and the second blade being translatably received in the second groove.

18. The combination of Claim 17 wherein

the pin includes external threading; and

the thimble including internal threading that is threadably engaged with the external threading of the pin.

19. The combination of Claim 18 wherein

the pin includes internal threading; and

the thimble including an externally threaded stem that is threadably engaged with the internal threading of the pin.

20. The combination of Claim 17 wherein

the anvil includes an interior region formed therein; and

the thimble being translatably disposed in the interior region.

21. The combination of Claim 17 wherein

the anvil includes a relief region formed therein generally in the vicinity of the at least first and second blades.

22. The combination of Claim 21 wherein

the collar includes a flared region; and

at least a portion of a flared region being receivable in the relief region.

23. The combination of Claim 22 wherein

the at least first and second blades extend into the relief region.

24. The combination of Claim 17 wherein

the anvil includes a key;

the thimble including a keyway formed therein;

the key being translatably received in the keyway to resist relative rotation between the thimble and the anvil; and

the thimble and the anvil being structured to be simultaneously rotatable with respect to the actuator.

25. The combination of Claim 24 wherein

the thimble includes a socket formed therein that is structured to receive a rotatable tool for rotating the thimble with respect to the actuator.

26. The combination of Claim 25 wherein

the actuator includes a passageway formed therein, the passageway being structured to receive the rotatable tool therein for communication with the socket.

27. The combination of Claim 26 wherein

the passageway extends through the piston.

28. The combination of Claim 13 wherein

the pin includes external threading; and

the thimble including internal threading that is threadably engaged with the external threading of the pin.

29. The combination of Claim 13 wherein

the pin includes internal threading; and

the thimble including an externally threaded stem that is threadably engaged with the internal threading of the pin.

30. The combination of Claim 13 wherein

the thimble includes a socket formed therein that is structured to receive a rotatable tool for rotating the thimble with respect to the actuator.

31. The combination of Claim 30 wherein

the actuator includes a passageway formed therein, the passageway being structured to receive the rotatable tool therein for communication with the socket; and

the passageway extending through the piston.

32. The combination of Claim 13 wherein

the nose assembly includes a thimble holder and an anvil holder;

the thimble holder being mounted to the piston;

the thimble being mounted to the thimble holder;

the anvil holder being mounted to the base;

the anvil being mounted to the anvil holder;

the anvil holder having an interior; and

the thimble holder being disposed generally within the interior of the anvil holder.

33. The combination of Claim 32 wherein

the thimble is rotatably mounted to the thimble holder.

34. A method of removing a collar from an elongated threaded pin, the method comprising:

providing a fastener release tool including an actuator, a threaded thimble, and an anvil, the anvil including one or more blades, the thimble and the anvil being disposed on the actuator;

threadably connecting together the thimble and the pin;

translating with the actuator one of the thimble and the anvil with respect to the other of the thimble and the anvil along a cutting direction generally parallel with the longitudinal extent of the pin; and

cuttably engaging the blades with the collar along the cutting direction to form one or more cuts in the collar.

35. The method of Claim 34, further comprising

translating with the actuator the one of the thimble and the anvil with respect to the other of the thimble and the anvil in a direction opposite the cutting direction to disengage the one or more blades from the collar.

36. The method of Claim 34, further comprising

unthreading the thimble and the pin from one another.

37. The method of Claim 34 wherein

said threadably connecting together the thimble and the pin includes threadably engaging internal threads on the thimble with external threads on the pin.

38. The method of Claim 37 wherein

said threadably connecting together the thimble and the pin further includes threadably engaging external threads on a threaded stem of the thimble with internal threads on the pin.

39. The method of Claim 38 wherein

said threadably connecting together the thimble and the pin includes threadably engaging internal threads on the thimble with external threads on the pin.

40. The method of Claim 34 wherein

said translating with the actuator one of the thimble and the anvil includes applying a tensile force to the thimble and to the pin in a direction generally parallel with the longitudinal extent of the pin to pull the collar into cutting engagement with the one or more blades.